5

update the display data in the displaying apparatus 100 having a feeling as if he turns the pages bending the book.

Alternatively, the display controller 140 may set the updating speed based on the deformation volume in the bend member 120. For example, the display controller 140 speeds up the updating speed as the deformation volumes increase. In this case, the user can set the updating speed of the display data only by changing the deformation volume.

FIG. 5 is a sectional view showing a configuration of a bend member 150a as a modification of the bend member 120a. FIG. 5 corresponds to the A-A section view of the bend member 150 shown in FIG. 1. In addition, a bend member 150b, i.e. a modification of the bend member 120b, includes the same configuration as the bend member 150a.

The bend member 150 includes a plurality of sheet-like bend members 152, and a plurality of deformation volume detectors 154. Each of the sheet-like bend members 152 is stacked each other. Each of the deformation volume detectors 154 detects each of the deformation directions of the sheetlike bend members 152 and each of the deformation volumes of the sheet-like bend members 152. The sheet-like bend member 152 is for example made of elastic resin. One end of each of the sheet-like bend members 152 is fixed to the frame 100a in the displaying apparatus 100 respectively, and the other end of each of the sheet-like bend members 152 is operable to be bended respectively. Each of the deformation volume detectors 154 includes planar piezoelectric material, which is fixed to each of the sheet-like bend members 152. Each of the deformation volume detectors 154 outputs a signal of the voltage polarity and a signal of the voltage, each of which is generated on a surface of the piezoelectric element, to the display controller 140, as a signal of the bend direction and as a signal of the deformation volume in each of the sheet-like bend members 152.

The user bends the plurality of the sheet-like bend members 152 with a feeling of turning papers when inputting an indication for updating the display data to the displaying apparatus 100 according to the present modification. Thereapparatus 100 with the feeling of turning the pages of the book.

FIG. 6 is a flowchart showing the operation of the display controller 140 according to the present modification. The display controller 140 decides which the sheet-like bend 45 members 152 is bended, based on in which the deformation volume detectors 154 the voltage is generated (S100). Next, the display controller 140 sets the display data to be displayed firstly, based on the result of each of the decisions of the sheet-like bend members 152. For example, the display con- 50 troller 140 sets the display data, based on a stacking order in which the bended sheet-like bend members 152 are stacked. In this case, the stacking order in which plural sheet-like bend members 152 are stacked may be related to the order of the pages of the electronic book, in advance. More specifically, as 55 the bended sheet-like bend member 152 is closer to the surface of the displaying apparatus 100, the display controller 140 sets the display data corresponding to the previous page of the electronic book, as the display data to be displayed firstly. Thus, the user can select the display data to be dis- 60 played firstly with the feeling of opening the book. In addition, when the displaying apparatus 100 of the present modification used, a plurality of sheet-like bend members 152 is usually bended by the user. In this case, the display controller 140 may select set the display data to be displayed firstly, 65 based on the stacking order of the bended sheet-like bend member 152 which is most closely to the surface of the

6

displaying apparatus 100, selected from the plural sheet-like bend members 152 which are bended.

Next, the display controller 140 decides that which the bend members 150 the sheet-like bend member 152 detecting the deformation volume, belongs to (S104). The display controller 140 sets the updating order of the display data, based on the result of this decision (S106).

After displaying the display data to be displayed firstly, in each time the user separates his finger from each of the sheetlike bend members 152, i.e., any of the sheet-like bend members 152 is released from its bend (S108 YES), the display controller 140 updates the display data (S110), and next the operation goes back to the S104. When none of the sheet-like bend members 152 is released from its bend for a predetermined time (S108 NO), the display controller 140 finishes the step of updating the display data. Therefore, the user can search desirable display data with the feeling of turning the pages of the book.

FIG. 7 is a front view showing a first modification of the 20 displaying apparatus 100. According to the present modification, the displaying apparatus 100 includes one bend member 160 in place of both the bend member 120a and the bend member 120b. Other components except the bend member 160 will not describe because they have the same configuration as the displaying apparatus 100 in FIG. 3. The bend member 160 extends in one direction, such as perpendicular direction. The bend member 160 includes a plurality of deformation volume detectors 162, each of which is located in certain interval along a longitudinal direction of the bend member 160. Each of the deformation volume detectors 162 includes piezoelectric material and outputs a signal of the bend direction and a signal of the deformation volume to the display controller 140. In the present modification, the displaying apparatus 100 detects which a part of the bend mem-35 ber 160 the user bends. The displaying apparatus 100 selects the display data to be displayed firstly or sets the updating speed based on the results of the detections. Therefore, the user can operate the displaying apparatus 100 with one hand.

FIG. 8 is a flowchart showing another operation of the fore, the user can update the display data in the displaying 40 display controller 140. The display controller 140 detects which a part of the bend member 160 the user bends. More specifically, the display controller 140 decides that which the deformation volume detectors 162 detects its deformation (S200). Nest, the display controller 140 sets the display data to be displayed firstly, based on the position of the bended part (S202). For example, when the user moves the bend position to an upper part in the bend member 160 shown in FIG. 7, the display controller 140 sets data of which order is previous to the present display data, as the display data to be display firstly. When the user moves the bend position to a lower part in the bend member 160 shown in FIG. 7, the display controller 140 sets data of which order is next to the present display data, as the display data to be display firstly.

> Nest, the display controller 140 decides the deformation volume of the bend member 160 (S204), and sets the updating speed of the display data, based on the deformation volume that is decided (S206). For example, the display controller 140 speeds up the updating speed of the display data, as the decided deformation volume is larger.

> Next the display controller 140 decides the bend direction at the bend member 160 (S208), and sets the order for updating the display data based on the bend direction that is decided (S210). Next, the display controller 140 updates the display data, based on both the updating speed and the updating order (S212). The display controller 140 repeats the steps from S204 to S212, as long as the user continues to bend the bend member 160 (S214).